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OF

MEDICINE:

A MONTHLY RECORD OF THE MEDICAL AND AUXILIARY SCIENCES.

तदेव युक्तं भैषज्यं यदारोग्याय कल्पते ।
सचैव भिषजां श्रेष्ठो रोगेभ्यो यः प्रमोचयेत् ॥
चरकसंहिता ।

That alone is the right medicine which can remove disease:
He alone is the true physician who can restore health.
Charaka Sanhitá.

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CONTENTS OF No. 7, Vol. XXVI, 1907.

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MEDICAMENTS OF LEUCORRHŒA.

By Dr. Chiron.

Leucorrhœa which may be defined to be "a pathological flux produced by augmentation and alteration of normal secretion of the genital apparatus" is the most common genital accident of the females. It may happen in all ages, under the influence of various causes, and it is so often scarcely perceptible and transcient, but sometimes abundant and tenacious that it necessitates an appropriate treatment.

The homœopathic therapeutics are still an unknown treasure. It presents to us numerous chosen variety of medicaments, which, when reasonably employed and well determined, permit to obtain the cure of leucorrhœa, rebellious to all other treatments and generally considered incurable.

Treatment.

Aconite. Abundant leucorrhœa, yellowish, tenacious, viscous, sometimes sanguinolent with sensation of heat, fulness and tension of the internal parts. Continuous itching is not disagreeable but forces the patient to scratch. Burning when urinating. Abdominal sensibility.

Actaea Racemosa. Endocervicitis in nervous females, neurasthenia. Hypersensibility of the organs of the pelvis; sensation of pressure in the uterus. Uterine inertia, uterine neuralgia, prolaspus uteri. Pain in the vertex, supra-orbital or in the eye.

Aesculus Hippocastanum. Leucorrhœa with feebleness in the back and pain of dislocation in the sacro-iliac sympheses which render walking very painful and fatiguing. It appears that the posterior part of the body will break at this place. Leucorrhœa thick, dark yellow, corrosive, worse after catamenia.

Agnus Castus. Transparent leucorrhœa, imperceptibly passing by the parts which are relaxed, not abundant, but spotting the linen yellow; suppression of menses.

Aletris Farinosa. Leucorrhœa with defective nutrition and debility. Ptyalism. *Uterine atony with painful pressure radiating in the hip.* Prolapsus or uterine displacement on account of feebleness. Obstinate constipation. Great disposition to easy abortion.

Alumina. Leucorrhœa abundant, corrosive, acrid, excoriating the parts, especially before the courses. Burning in the sexual parts. Painful sensibility in the vulva and rectum, making walking difficult; flow whitish, mucous, making the linen stiff; *flow only in the day* in the intermenstrual period with great feebleness and sensation as if the flow ran down the vagina and *descended in great quantity to the feet.* Leucorrhœa ameliorates by cold injections; pain in the back, as if a hot iron was applied to the inferior vertebrae; insipid taste and mouth dry; agrees with chlorotic females with morbid appetite and excessive sexual excitement.

Ambra. Leucorrhœa only at night of whitish mucus, preceded by shooting in the vagina, or leucorrhœa mucous, chronic, increasing day by day with painful sensibility, itching and swelling of the labiae.

Ammonium Carb. Leucorrhœa abundant, aqueous, burning, when it comes from the uterus with tearing pain in the abdomen; abundant and extremely acrid, when it comes from the vagina. Excoriation, ulceration of the vulva, irritation of the clitoris. Menses advancing, abundant, blackish, often in clots. Pain in the inferior part of the back, with sensation of constriction between the two shoulders. Loss of appetite; headache after walking in fresh air; sleep during the day,

insomnia at night; agrees with sickly, delicate and feeble females. *Well indicated when the flow exhales even a little ammoniacal odour.*

Ammonium Mur. Leucorrhœa albuminous as the white of egg preceded by pinching pain around the umbilicus; flow brown, viscous, after the menses; violent pain in the lower part of the back especially at night; sensation of cold between the two shoulders; abdomen distended without flatulence. Constipation, stool hard and crumbling. *Leucorrhœa during each micturition.* Choleraic symptoms at the appearance of the menses. At each period there is flow of blood by the intestines.

Antimonium Tart. Leucorrhœa viscous, white and mucous. Chronic cervicitis with superficial erosion at the orifice; flow of blood and water, *especially when she sits down*; comes out by paroxysms; sensation as if a heavy load is attached to the coccyx; itching in the genital parts.

Anacardium. Flow white, corrosive and prurient with excoriation of the parts.

Argentum Nitricum. Flow mucous, sanguinolent, corrosive, yellowish, abundant. Prolapsus with ulceration of the orifice of the neck. Irregular menstruation. *Painful intercourse followed by hæmorrhage from the vagina.*

Arsenicum. Flow small in quantity, thick, acrid, corrosive; sometimes even ichorous. Pain pressive, burning, lancinating in the ovaries, extending to the thighs, aggravates by movement and in the act of lowering down. *Chronic endometritis with menorrhagia* or endocervicitis. Feeble, pale females whose skin is white as that of wax, fatigued at the least effort. To all these may be added the suppression of the menses and the increase of leucorrhœa at the time when the menses should appear.

Arsenicum Iod. Leucorrhœa aqueous, acrid, corrosive, sometimes of foetid odour. Ulceration of the neck. Menstruation abundant reappearing very often.

Aurum. Leucorrhœa abundant, thick, yellowish, corrosive. Prolapsus uteri; urine turbid, thick; feebleness and nervous prostration. For the syphilitic or scrofulous.

Asafœtida. Flow abundant, acrid, yellowish. Pain as that of labour in the uterine region with sensation of pricking and pulling downwards increased by walking or when going in a carriage. Ulceration of the neck.

Badiaga. Leucorrhœa worse at night with sensation of increase of the flow and fulness in the head.

Baryta Carb. Leucorrhœa mucous and sanguinolent coming *immediately before the menses,* with anxious beating of the heart, agitation in the abdomen; pain in the loins, and weakness amounting to exhaustion. Indicated for young females, scrofulous, chlorotic or anæmic.

Belladonna. Leucorrhœa white; yellowish, acrid, abundant, with colic suddenly appearing and disappearing. Paroxysms of pressure in the abdomen, as if something wants to come out by the vulva, with increase of leucorrhœal flux during each paroxysm; *these are more frequent in the morning,* increase in inclined position and walk, and diminish during rest and upright position. Acute endometritis; neck of the uterus sensible, swollen and red. Insomnia. Headache. General heat of the body.

Berberis. Albuminous leucorrhœa before menses (Bad., Calc. carb.) with burning after urination and painful sensation all along the urethra. Acrid leucorrhœa producing great prostration and feebleness. Violent pain in the sacrum and loins. Menses in advance. Sensation of boiling as if water would pass across the skin. Melancholia.

Borax. Leucorrhœa white, albuminous, resembling the white of egg, happening in the inter-menstrual period, with sensation as if hot water is flowing along the thighs. Pricking in the clitoris. Menses too early and very abundant with pain extending from the stomach to the lower part of the back. Very nervous females, can not tolerate movement, either when mounting a horse or descending a ladder. Sterility. Trifling excoriation of the skin produces sore which can be slowly cured.

Bovista. Flow white, after the menses. Leucorrhœa thick, viscous, albuminous, coming especially during walk. Leucorrhœa

greenish, yellowish, acrid, corrosive, spotting the linen and excoriating the thighs. Sensation as if the head is enormously swollen. Herpetic persons.

Calcarea Carb. Flow white before and after menses. The flow has *milky* appearance occurring principally during the day and when urinating. Leucorrhœa of adult females, only mucus and accompanied by *violent itching of the genital parts* (*Sepia* is more often acrid than *Sulphur*). General heaviness especially of the knee and leg. Acute pricking and burning in the neck of the uterus. Flow increases after excitement. Enough mucus between the lips and thighs with corrosive pain. Voluptuous sensation in the genital organs after menses which are frequent and profuse. Skin soft and as if infiltrated. *Leucorrhœa of slender females, symptoms of scrofulous cachexia.* Chlorosis.

Calcarea Phos. Leucorrhœa *after menses.* Leucorrhœa increases when the menses diminish. It resembles the white of egg and has sweetish odour, and is worse in the morning after rising from bed. Sensation of feebleness in the sexual organs, increased after stool and urine. Great lassitude and debility. Emaciated appearance. Especially suited to slender females. Plain acne with yellow pus. Indicated in young females who have suffered chagrin of love. Nymphomania.

Cannabis Sativa. Infantile leucorrhœa. Blennorrhagic leucorrhœa. Sensation of cutting in the labiæ during urination. Swelling of the vagina.

Calendula. Leucorrhœa ichorous and purulent.

Cantharis. Leucorrhœa acrid, corrosive, burning during micturition. Flow is reddish as mixed with blood.

Frequent desire for urination with pricking and burning during emission of urine which comes out in small quantity. Headache or intense and profound pain in the brain. Pressure upon the genital organs. Increased sexual desire.

Carbo Animalis. Scrofulous leucorrhœa. Leucorrhœa spotting the linen yellow, burning and smarting. *Induration of the*

neck of the uterus. Aqueous leucorrhœa flows during walking and standing with sensation of weakness in the stomach.

Carbo Vegetabilis. Aqueous leucorrhœa, abundant especially in the early morning on rising from bed. Leucorrhœa before menses or flowing in preference after passing urine. Flow very acrid, excoriating the parts with pruritus very painful in the genital organs and anus. Soreness of the vulva with great itching, heat and redness. Abdomen swollen. Amelioration by emission of gas. Irritable and changeable character. The things which she loved at one time cease to please her.

Carbolic Acid. Leucorrhœa abundant, fœtid, greenish, acrid with uterine catarrh. Sensation of sharp shooting pain across the loins and lower down. Frequent desire to urinate with burning in the urethra. Flow of leucorrhœa when urinating or increases after profuse menses.

Caulophyllum. Leucorrhœa abundant, very weakening in young females, with menstrual troubles. Uterine laxity and flaccidity, or displacement and passive congestion of the uterus. Although the young leucorrhœic females carry the disease at the beginning of their life and the marks of it, but it is a precise indication of the medicament (in default *sepia* but *sepia* agrees more with all females than young females).

Causticum. Leucorrhœa abundant, flowing as in menses and having also the odour. Emission white coming only at night or in great abundance at the time. Menstruation in advance and profuse. Abdominal cramps. Physiognomy expresses sufferance, yellow tint; superior eye-lid tends to fall and it is necessary to make effort to elevate it.

Ceanothus. Leucorrhœa yellow, with pain under the false rib of the left side. Menses profuse. Affection of the spleen.

Cedron. Leucorrhœa coming regularly during each month five or six hours before the period with pain in the uterus and swelling of the vulva. *Leucorrhœa instead of the menses.*

Chamomilla. Leucorrhœa yellow, acrid, aqueous, corrosive, flowing especially *after rest.* Burning in the vagina as if it was excoriated. Pressure in the uterus resembling labour-pain

with frequent effort to urinate. Nervousness and hysterical spasm.

China. Leucorrhœa before menstruation or in its place, pressive pain in the groin and anus. Sanguinolent leucorrhœa with emission of small black and fœted clots with contraction of the internal parts. Great feebleness accompanied with a certain degree of irritability. Great desire for deep respiration with painful sensation in the heart. Abdomen swollen; emission of gas does not relieve. (*Carbo Veg.* ameliorated by emission of gas).

Cocculus. Sanguinolent leucorrhœa in the place of menstruation or in their interval. The menses are irregular and slightly abundant. The period finishes by an inappreciable quantity, the leucorrhœa is only apparent. Leucorrhœa resembles a mixture of serum and purulent ichorous liquid. Tearing pain in the back and as if the menses will come particularly after eating or drinking cold things. Sensation of general prostration as if it is impossible to make an effort. Can scarcely speak.

Coffea. Abundant mucus with frequent emission of blood. *Immoderate over-excitation of the genital parts and voluptuous itching.*

Conium. Flow of white and acrid mucus with violent itching and burning of the vulva accompanied by pressure in the lower part of the uterus. Prolapsus uteri. Rigidity of the neck of the uterus. Before the flow of whites: frequent colic, pinching and paralytic feebleness in the loins. After the flow of whites: lassitude and hoarseness with cough and expectoration. Constipation. Cephalalgia. Vertigo particularly on turning in bed. Great irritability. One of our best remedies in induration, particularly of the scrofulous nature. *Leucorrhœa during pregnancy.*

Copaiva. Leucorrhœa of the gonococcic nature, sanguinolent, acrid, and excoriating. Flow white, thick, puriform and yellowish with continual pressure towards the vagina. Hæmaturia.

Crocus Sativus. Leucorrhœa with emission resembling the blood, filaments arranged against one another and forming

cordon. Permanent sensation as if the menses will ensue. Acute pricking runs from the pudendum to right thigh as if a knife is thrust from time to time in the parts penetrating gradually and augmenting the pain.

Cubeba. Leucorrhœa profuse greenish yellow, very acrid, and of an irritant odour. Erythema at the internal surface of the thigh and pruritus of the vulva with great desire for coition. Burning small pustules; ulcers resembling vesicles and condyloma on the vulva. Fissured and bleeding excrescences on the orifice of the neck. Uterus inflamed and painful as if there exists a tumour. Menses in advance often preceded or followed by leucorrhœa. Menstruation slightly abundant, leucorrhœa especially present.

Curare. Leucorrhœa rare, thick, purulent, of bad smell. Leucorrhœa in clots. Ulceration of the neck of the uterus. Smarting pain in the vulva and thighs. Acute lancinating pain in the uterus.

Cyclamen. Leucorrhœa in blonde females with leuco-phlegmatic temperament associated with menstrual irregularities. Chlorsis and anæmia. Access of weakness and coldness in all the body.

Drosera. Leucorrhœa with colic as during confinement with suppression of menses.

Dulcamara. When leucorrhœa has been caused by humidity, or in cold season.

Erigeron. Abundant uterine and vaginal leucorrhœa, with spasmodic pain and irritation of the bladder and rectum. Menses are ordinarily rare. Chronic uterine leucorrhœa. Dysuria.

Eucalyptus. Leucorrhœa abundant, yellowish, corrosive, irritant. Acute catarrh of all the mucous surfaces.

Eupatorium Purp. Chronic metritis. Leucorrhœa profuse, does not leave any mark on the linen. The patient *always believes that the external genital organs are moist,* but it is an error. Urinary complications.

Ferrum. Leucorrhœa milky, smarting, corrosive at the beginning, but which is soon after no more acrid. White flow before the menses with emission of mucous filaments from the vagina. Pain or insensibility during coition. Hysteria and chlorosis.

Ferrum Iod. Leucorrhœa resembles boiled starch. Flow filandrous during defæcation. Itching and painful sensibility of the vulva and vagina. Parts are very much swollen. Retroversion of the uterus.

Graphites. Leucorrhœa profuse, mucous, often provoking excoriation. The flow comes out *by jets, by jerks.* It appears day and night, but especially in the morning on rising. Sensation of weakness in the loins and back. Complete absence of menses or menses are rare and pale. General feebleness and prostration. Tendency to sleep during the day and insomnia at night. *Induration and congestion of the neck of the uterus.* Warty excrescences on the neck of the uterus.

Guaco. Leucorrhœa putrid. abundant, corrosive, very debilitating. Terrible itching of the thighs worse at night.

Hamammelis. Profuse leucorrhœa with great relaxation of of the vaginal wall. It suits blondes with leucophlegmatic temperament, Passive hæmorrhage.

Helonias. Weak females with prolapsus or other displacements. Neck of the uterus ulcerated. *Old chronic cases without congestion.* Leucorrhœa dark, fœtid, obstinate, increases by the least effort. Painful sensibility and pressure in the morning. Feebleness with sensation of fatigue in the back and limbs. Anæmia with albuminuria. Appearance expresses sufferance. Sometimes itchiness of the sexual parts.

Hepar Sulph. Leucorrhœa with smarting in the vulva *Pruritus during menses.* Uterine ulcers with sanguinolent suppuration smelling like old cheese. The edges of the ulcers are very sensitive. Often sensation of pulsation in the ulcer. Enough scratching or small pimples around the ulcer.

Hydrastis. Leucorrhœa abundant, viscous, sticky, and filandrous. Exploration by speculum discovers a cord coming to the uterine orifice which is *generally ulcerated.* Mucous leucorrhœa, profuse and debilitating. Violent pruritus immediately after menstruation. Leucorrhœa complicated with hepatic troubles and constipation. Flow tenacious with weakness at the pit of the epigastrium and continuous palpitation of the heart. Pruritus of the vulva. Hæmorrhoids.

(To be continued).

REVIEW.

The British Journal of Tuberculosis, January 1907.—Published Quarterly; Annual Subscription—Five Shillings—Bailliere Tindall and Cox, 8 Henrietta Street, London, W.C.

We owe an apology to the publishers for not taking up the Journal earlier in hand to give our opinion on it. The Journal has really filled up a long felt want. In these days of rapid locomotion giving facility to travel from one country to another, people undergo a sudden change of temperature and other various climatic influences, and thus contract diseases which they might otherwise have avoided. Among many other contagious diseases which is contracted readily tuberculosis is one of them and is the most dreaded of all. The prevalence of this disease is keeping a good pace with the advance of civilisation, and the humane physician can never rest idle without finding a remedy or remedies which will be able to cope with this fearful bane of human life.

The publishers deserve the thanks of the medical men as well as of the people in general for having arranged with the master minds to publish a journal quarterly on such a subject. The articles are almost all from the pen of well-known physicians of the day who have devoted and are devoting their time and attention to such a terrible disease that flesh is heir to. The opening article by the editor though short is an able one and the editor is right when he says that "The arrest and extermination of the tuberculosis, if it is ever to be attained, must be by a reform of the human factor and a reconstitution of his environment. This being so, it is clear that the question must be viewed from a broad standpoint. It is to be investigated not as a small field in the wide domain of pathology, but as an integral part of that greatest of all subjects of inquiry—the revelation and restoration of mankind."

The articles by Drs. Allbutt, Byrom Bramwell and Phillip and those by Sir Lauder Brunton, Sir Hermann Weber and Sir Samuel Wilks are excellent and we need not quote any passage from them. One's time will be profitably spent by reading all these through and through.

The Journal is excellently got up in every sense of the term. The type, the printing, the paper and the various illustrations are really superb. Besides the readable matter of 102 pages, there are about 52 pages of advertisements.

We heartily welcome this new journal and wish it a rapid success.

Aids to Medical Diagnosis. By Arthur Whiting, M.D., M.R.C.P. *pp X + 152 with 8 Illustrations; Price 2/6; Bailliere, Tindall and Cox,* 1907.

This is a valuable addition to the aids series of Messrs. Bailliere Tindall and Cox. The handy little books of the aids series are very good helps to the students going up for their examination and also to the practising medical men to refresh their memory from time to time.

The chapter on nervous system has been clearly dealt with and the six diagrams out of eight in the whole book give a good idea of the distribution of nerves and of the centre of some of the important organs.

It is a handy little book and every student and running practitioner should not lose the opportunity of keeping the book often by his side.

Three Essays. By Rai Rajendra Chandra Sastri Bahadur, M.A., *Fellow of the Calcutta University, Member of the Asiatic Society of Bengal, &c. Published by Devendra Nath Banerjee, 30 Tarak Chatterjees Lane, Calcutta. Price 8 annas.*

Better late than never is a principle which should not be left out of sight. And it is only for this maxim that we have ventured to take up the pamphlet to give our honest opinion on it. It will now be understood that we have delayed not from any other motive but from our intense desire to do justice to it. The pamphlet before us contains three essays, as the name indicates, on three widely different subjects, viz., Modern Bengali Fiction, Municipal Institutions in Ancient India, and the Garbhadhan Ceremony. The first of these will be disposed of in a few words as we are least concerned with it. It was read at the Indian Association for the Cultivation of Science, on the 24th of August 1902, on the occasion of the 66th anniversary of the death of David Hare. This essay has a peculiar relation with the Indian Association for the Cultivation of Science. The founder of the Association, Dr. Mahendra Lal Sircar, who also started this journal, was a student of the Hare School. David Hare was a large-hearted philanthropist and took great delight in mixing with the students and meeting their wants. The western education could not have been made so popular if he had not worked so unselfishly for its cause. He also, for sometime, acted as Secretary to the Medical College and it was for his sake to some extent that the Hindu students could be attracted there. To perpetuate the memory of this great man who loved the Indians so greatly that Dr. Sircar thought fit to open a Professorship Fund in connection with his Association

But is it not shame on our part that we have not yet done anything substantial for him whose heart bled for the poor students and who did not think it beneath his dignity to go to the houses of the students whenever they failed to attend the school and enquire about them and help them with medicines, books and very often with money? Our position, in the scale of a nation, will remain eternally where it is till we are not sensible of the fact, that we do not know how to honour those whom honours are due.

The second essay on "Municipal Institutions in Ancient India" is an excellent attempt to show that such institutions were not altogether unknown to the Indians in past days. Municipality might not have existed in the same sense, as it is now understood by the term, but that there were institutions where people took part in the local administration there is not the least doubt, has been conclusively shown by the author by various quotations from Yajnavalkya, Vrihaspatia, Narada and others.

The author quoting a few passages from Vrihaspati, Viramitrodaya and others shows "that municipalities and other public bodies in ancient India enjoyed large powers within their respective limits; that they were created and managed entirely by the people; that their duties were similar to, and in some respects, much more arduous and comprehensive than, those now performed by similar institutions under British rule; that they enjoyed considerable civil and criminal jurisdiction within their limits; that they could punish their Commissioners in case of misconduct, even with banishment from their area, and that the Government had to endorse their decision, except when they were irregular or improperly arrived at."

In the Municipal Institutions of Ancient India we should utterly fail to find the conservancy, water works, engineering and such other departments with their greedy vultures in the shape of higher and lower officials attentive more to their stomach than to the weal of the public. In Municipal Institutions of Ancient India we should fail to find neglect of duty, the mother of all inconvenience and trouble to the rate-payers. The rates too did not increase then most arbitrarily every six years, and the poor men had not had to complain for the insufficiency of water supply after paying their life-blood in the shape of rates and taxes. In fact, we think ourselves advanced in the scale of civilisation in spite of this grinding, dishonesty and neglect of duty.

Honesty and duty are the virtues which can never remain with men whose education is faulty and whose love for money

is greater than the love for their fellow creatures. People in ancient days did their work not for any renumeration from this world but for reward in the other, and all their actions therefore were interwoven with religious sentiments, and hence free from wrong doings as far as possible. We can only hope that by better education the morals will be changed and the people will better understand their duty, and unless we get good men in the employ of our Municipalities we can never expect good work.

The last essay on the "Garbhadhan Ceremony" *i.e.*, the ceremony for the consummation of maraiage is the most important of all. This essay was written "with the object of placing before the Government, the sastric aspect of a question over which the public mind was greatly exercised at the time" when the Age of Consent Bill was introduced into the Council. The author begins by drawing his materials from the Vedic Age, but suddenly dismisses the idea of doing so on the ground that these are all "Prehistoric." And then jumping over the age of *Brahmanas* he at once arrives at the age of the *Grihya Sutras* which according to him is the connecting link between the prehistoric and historic ages. The *Grihya Sutras* are three in number and convey different views altogether, and we are therefore at a loss to understand which one should have the preference in all our actions and especially the most important of human life, the garbhadhan ceremony.

The garbhadhan ceremony is no doubt the most ancient ceremony. In the primitive stage of human society, when the paucity of population was a question, such ceremonies were of a highly sociological interest and like all the acts of the Hindu society it was interwined with the religious ideas and hence a religious character is given to it. This ceremony came in vogue when the post-menstrual marriage was as a rule, the prevailing custom of the time. But, bye and bye, through the process of dissolution, people left the idea of late marriage and became partial to early or pre-menstrual marriage. The idea of marriage changed but the primitive idea of its consummation being more attractive, took its root deeper and the sages began to comment and write explanatory notes on such a thing as the permission of sexual intercourse after so many days from marriage or its prohibition under certain circumstances. All the injunctions were obeyed, more in their violation than in their observance perhaps. Curiously enough, we find a passage in Vijnaneswara, the writer of the celebrated *Mitakshara*, a commentary on Yajnavalkya, where a man is still considered as observing the vow of abstinence when he cohabits with his wife in her menses. There are so

many opinions on this subject that we think it to be utterly useless to dwell upon it at any length. In fact, the more we try to enter into the subject the more we find the opinions to differ. If the garbhadhan ceremony is to be observed as a religious ceremony, the marriageable age of a girl then should not have been changed at all. The later so-called historical writers of our author (we do not know under what class Manu will come then) began to twist and turn the sastras to their favour, keeping the garbhadhan ceremony for the purpose of enjoyment and at the same time reducing the marriageable age of a girl. This sensual appetite showed its culminating point during the time of Parasara when injunctions were given by him to have the girls married at the lowest minimum age of eight and the garbhadhan ceremony to be performed immediately on the appearance of the first menstruation.

This change has produced a baneful effect in our society. The neglect of wise and sound dictum of Physiology has produced a race at once weak and ill-developed. The evil or the good effect is not produced all at once in the life of a race or of a species but it will visit the race or the species through a long process of evolution ultimately. We are now reaping what the sociologist of the ancient days had sown without paying much heed to physiology. The author has after a survey of the whole sastras come to the conclusion that the Age of Consent Bill when passed into law will directly "interfere with the practice of Hindu religion, specially, with that which insists on the performance of the sexual act during the menses". We can not agree with the author, because the garbhadhan ceremony for all intents and purposes has become a thing of the past and is not rigorously imposed upon any one and no atonement is required even for its violation. Such being the case, we must not put stress upon a matter which people have already begun to forget.

Meteorological Observations taken at 8 A.M. at the Indian Association for the Cultivation of Science, Calcutta.

For the Month of June, 1907.

Date.	Barometer.	Wind.		Temperature.		Humidity.	Cloud.	Rainfall in inches of past 24 hours.
		Direction.	Velocity per hour in miles.	Maximum.	Minimum.		Proportion.	
1	29·481	E	6·0	99·0	78·5	79	10	*Nil.*
2	29·482	E	5·6	97·5	82·0	81	10	0·06
3	29·669	S	4·5	100·8	73·5	78	4	0·49
4	29·676	S	4·2	101·0	73·2	80	8	*Nil.*
5	29·633	W	5·8	97·8	84·0	71	3	"
6	29·595	S	7·0	98·1	85·0	67	3	"
7	29·509	S	6·2	99·0	85·5	77	2	"
8	29·489	S	6·0	101·0	86·0	77	7	"
9	29·547	E S E	5·6	99·0	76·8	81	3	0·28
10	29·599	S	5·5	99·5	84·0	70	4	*Nil.*
11	29·680	S	4·8	98·1	78·0	77	4	0·45
12	29·669	S W	2·6	96·0	82·0	71	4	*Nil.*
13	29·639	E	3·0	97·0	81·5	69	5	"
14	29·629	S	4·4	98·0	81·2	64	5	"
15	29·601	E	3·0	95·1	80·0	73	3	"
16	29·547	E	4·5	97·0	80·0	78	3	0·23
17	29·493	E	4·4	95·2	79·8	89	9	0·10
18	29·261	N E	6·8	87·8	78·0	96	10	1·62
19	29·391	S	11·3	83·8	77·0	87	10	3·65
20	29·538	S	7·5	89·0	80·5	84	8	0·36
21	29·481	S	9·3	92·0	82·0	82	3	*Nil.*
22	29·389	E	5·5	94·5	79·8	87	9	0·04
23	29·350	N	6·4	90·0	78·0	96	10	0·09
24	29·260	N	9·3	87·2	79·2	89	10	0·27
25	29·099	S	16·8	81·5	76·0	100	10	9·15
26	29·486	S	9·6	88·2	77·0	84	5	0·69
27	29·550	S	6·0	91·0	81·1	88	7	0·01
28	29·559	S	5·1	92·0	81·0	91	10	0·06
29	29·520	S	3·2	90·0	81·0	89	9	0·10
30	29·416	S	3·7	92·0	81·0	96	9	0·02
Mean	29·507	E S E	6·1	94·2	80·0	82	7	Total 17·67

Remarks: The mean atmospheric pressure of the month of June was further reduced to 99·507 inches from 29·692 in May.

The mean direction of wind was E. S. E.. The mean velocity of wind increased from 3·7 of the last month to 6·1 during the month under review. The mean maximum was 94·2 and the mean minimum 80·0. The difference between the two means came to 14·2 in contrast to 18·5 of the last month. The mean humidity was 82. In May it was 72. So there was an increase of 10 degrees. The total rainfall came to 17·67 inches. It was only 4·30 during the last month. We got the monsoon from the first week of the month.

During the week ending the 25th May, the mortality from cholera was 46. In the week ending the 1st June, it came down to 32. In the next week ending the 8th June, the mortality increased to 40. In the week ending the 15th June it was 37. During the next week ending the 22nd June, the mortality was 44. In the week ending the 29th June death from the disease increased to 68. The increased rainfall could not check its spread. It is doubted whether Tolly's Nullah is the only source from which the disease originates. The augmented rainfall would have then prevented the spread even to a slight extent.

During the week ending the 25th May the mortality from plague was 131. In the week ending the 1st June it was 100. In the next week ending the 8th June it came down to 68. In the week ending the 15th June the mortality was 62. During the week ending the 22nd June, the reduction came to 25. In the week ending the 29th June it was 28 almost and remained almost stationary. The noticeable fact is the increased rainfall during the month.

Smallpox took away from 26 to 2 persons in a week during the month. The reduction was gradual. Mortality from fever ranged between 95 and 63 during the month. On the whole death from the disease was almost the same, in comparison to that of the last month.

Bowel complaints took away from 36 to 33 persons in a week. In comparison to the last month the mortality was less. It can not be said that the reduced number of deaths was due to the increased rainfall.

EDITOR'S NOTES.

Unexpected death and the Status Lymphaticus.

The *British Medical Journal* of June 1, writes:

"Two recent cases have called public attention to the condition known as "status lymphaticus," but there is no ground whatever for trying to make a sensation of it, as certain newspapers have done, as if it were something altogether new to the medical profession. For many years it has been known that in children sudden death occurred from trifling and apparently quite inadequate causes. Those who have made many medico-legal *post-mortem* examinations or have been pathologists to large children's hospitals, have learned to recognize a group of fatal cases in which it has not been possible to determine the precise cause of death. In some instances slight dyspnœa had preceded the fatal event, and as enlargement of the thymus has been found, to this the death has been attributed—the so-called thymus death. But in 1889 Paltauf, from an unusually rich experience, gave a new explanation of these cases. He determined that in addition to enlargement of the thymus there was a general hyperplasia of the lymphatic glands and the adenoid tissue generally, particularly the tonsils and the lymphatic follicles of the intestines and of the spleen, and hyperplasia of the arterial system has also been present. To this combination he gave the name "status lymphaticus." Clinically the subjects are usually well nourished, but pale and of a flabby lax habit, with the superficial glands enlarged, hypertrophy of the tonsils, a palpable spleen and a percussion flatness over the sternum, indicating an enlarged thymus. The children are often rickety or the subjects of eczema or prurigo. Spasm of the larynx has been a common feature. The sudden death has taken place under a variety of circumstances. One of the most common has been during anæsthesia for some slight operation, as circumcision, or for adenoids, or during convalescence from a mild fever. The explanation is by no means easy. In a few cases in which dyspnœa has been a symptom the compression of the enlarged thymus may have been the cause, but in a majority no satisfactory reason has been found, and writers have been forced to conclude that there is a special vulnerability of the system associated with the general hyperplasia of the lymphatic tissues. Others have thought that it may mean an overproduction of the internal secretion of these structures or lymphotoxæmia. But whatever the explanation, we must recognize the existence of the group of cases, and in children who present the signs of this lymphatism, as it is called, we should not advise operation, and we should be particularly watchful in what appear to be slight ailments."

The research of a new state of things with regard to the hyperplasia of lymphatic glands and adenoid tissue and the hyperplasia of the arterial system has proved to be a serious disturbance to children. The hyperplasia which is manifested by the enlargement of the thymus, spleen, tonsils, lymphatic follicles of the intestines and

other glands proves to be a serious mischief. The arterial hyperplasia has not been determined to that extent, except as it is shown by pressure of the enlarged glands on the arteries. Further investigation is wanted to land us on a safe assertion.

Intestinal Origin of Pulmonary Tuberculosis.

We read in the *British Medical Journal* of June 1, the following:

"Calmette and Guérin (*Ann. de l' Instit. Pasteur*, August, 1906) contribute a third article in support of their view that pulmonary tuberculosis is not usually an inhalation infection, but is due to bacilli which have gained their entrance into the body by the intestinal tract. With goats, calves, and adult bovines they have found that when the bacilli are introduced at the end of an oesophageal sound and the possibility of contaminating the air passages is rigorously excluded, a single feeding with tubercle bacilli of bovine origin produces in every case tuberculosis of the thorax. The tubercles are found, in from thirty to forty-five days, beneath the pleura and particularly at the upper and anterior borders of both lungs; peribronchial tubercles are also found surrounding the finer ramifications of the bronchioles. The tuberculous granulations never develop primarily in the alveoli; sometimes they form projections into the interior of alveoli and bronchioles which they finally occlude; and sometimes they ramify along the distended alveolar walls. The process always commences in the lung capillaries, and the involvement of the alveoli and bronchioles is a secondary event. Criticizing inhalation experiments which have led to positive results, they point out that the animals swallow, as well as inhale, the infective material administered, and they wish to regard the lesions produced as attributable to bacilli absorbed by the intestinal tract. Direct infection of the lungs by way of the air passages is, they maintain, a rare event. The authors are now endeavouring to produce immunity against tuberculosis by introducing into the alimentary tract bacilli which have been attenuated, modified, or deprived of virulence."

The contest between the inhalation and the absorption theories of tuberculosis is yet raging keenly. The inhalation theory headed by Koch of the German school is disposed to prove that the inhalation of the debris of tubercles or the entrance of comma bacilli in the lungs originates the disease, whereas most medical men of the French school are disposed to derive the infection of tuberculosis from the absorption of the germs in the intestinal canal. In India, it is generally observed that a case of tuberculosis in a house is not followed by another for a long time, in the same house. Had the inhalation theory been correct, it would have naturally led to other cases from infection by respiration in the infected house, which does not happen. We are disposed to side with the French school which attribute the propagation of tuberculosis to intestinal absorption, as we see the milk of consumptive cows is a fruitful source.

Shreds in the Urine.

We read in the *Medical Times*, June:

"De Santos Saxe (*N. Y. Med. Jour.*, March 2, '07) was led by the scanty references to shreds in most text-books to study these elements in many cases of chronic urethritis, prostatitis and vesiculitis. He details in his important contribution the best methods of fixing and studying shreds. Those found in the urethra are either: pus shreds, mucopus, mucous and epithelial shreds, each having special macroscopic and microscopic characteristics. Several varieties of altered epithelia are found in urethral shreds. Those undergoing hyaline changes may be identified not only by the iodophile reaction, but by a peculiar degeneration as shown by their staining qualities with polychrome methylene blue. Shreds composed of pure epithelia consisting of flat pavement cells with small nuclei are shed spontaneously or after instrumentation, in the stage of the disease in which the superficial layers of the urethra become lined with these cells under the influence of subjacent or submucous lesions. Shreds from the prostate and vesicle include several varieties recognizable under the microscope, but not the naked eyes. The "comma" shreds may be of two varieties of structure. The true comma shred of Fürbringer consists of hooklets of stratified epithelia, derived from the prostatic duct; a false variety is made up of bits of mucous shreds which roll up into a lump at one end. The frequency of gonococci in urethral shreds is directly as the proportion of pus cells, and inversely as the proportion of mucus and epithelia in the specimen; this rule does not apply to prostatovesicular shreds. The study of shreds is not of great value in the localization of the affection in the urethra, either anterior or posterior; it is most valuable in determining the stage of the process, the order of appearance being, with certain reservations, pus shreds, mucopus shreds, mucous and then epithelial shreds. The variety of urethral shreds present can have but a limited prognostic value. The fewer the shreds and the fewer the pus cells therein the better the prognosis; the larger the number of gonococci and of pus cells the worse the prognosis as a rule. Marriage should certainly not be sanctioned unless the terminal shreds contain no pus for months, even after provocative measures, such as the drinking of beer."

The shreds have most important bearings not for localising any disease but to ascertain its pathological or bacteriological nature. The best sample of urine is that where there are a few shreds. The next in order is that which contains shreds in quantities but no pus cells. Pus cells with gonococci comes to the province of positively bad nature. The worst is that which contains bacteria in large number, as any of the cocci and comma bacilli, etc.

Helianthus Annus.

The *Homœopathic Recorder* of June 15, writes:

"This is a remedy that is rarely used, yet a Spanish physician has recently asserted that it is a splendid febrifuge, and can be used most successfully as a substitute for *Quinine*. It is a "people's remedy" in Russia, where the peasantry insist that it is *the* fever remedy. In Homœopathy it is recommended for old cases of intermittent fever. *Helianthus annus* is a tincture of sun-flower seeds."

We are aware of the properties of the Helianthus in India in respect to intermittent fever. Like it, in large doses the juice of the leaves of Asclepias Gigantea has cured many cases of intermittent fever when administered during intermission.

The Indian Bedbug and the Kala Azar Disease.

In *Science* of June 28, we find:

"It is not generally known by the entomologists of this country that the common bedbug of India is not *Cimex lectularius* Linnæus, but *Cimex rotundatus* Signoret (=*macrocephalus* Fieber). Captain W. S. Patton, of the Indian Medical Service, has recently published important papers on this insect, especially in regard to its pathogenic relations. In a brief note on the distribution of these two house-infesting bedbugs published in the *Indian Medical Gazette*, XLII., February, 1907, he points out the above-mentioned fact, and leads us to form the opinion that enough observations have not been made along that line. *Lectularius* is apparently distributed mainly throughout the North Temperate Zone, while *rotundatus* is tropical or subtropical; and though until very recently known from Burma only, it is now recorded by Dr. Patton as occurring throughout India, Assam, Malay, Aden, Mauritius and Réunion (Patton, *ibid.*) and still more recently (Patton, April 4, 1907, *in litt.*) it is recorded from St. Vincent, Sierra Leone and Porto Rico. I have specimens from Madras Presidency (South India), Réunion, Mauritius and St. Vincent, kindly sent by Dr. Patton.

These facts in regard to the distribution of the Indian bedbug become of economic importance in view of the now definite evidence which Patton presents that the dreaded kala azar disease of India is carried by that insect. This evidence is published as No. 27, new series, *Scientific Memoirs by Officers of the Medical and Sanitary Departments of the Government of India*, Calcutta, 1907, and is entitled 'Preliminary Report on the Development of the Leishman-Donovan Body in the Bedbug.' By the means of extensive experiments with bedbugs, it is fully demonstrated that these bodies, the cause of the disease, are ingested from patients and go through considerable development. In a postscript to this paper, Patton states that all of the intermediate stages of develop-

ment and fully developed flagellates have since been found in the insect, and he states his belief that 'it is beyond all doubt that this insect transmits the disease.' Owing to condition, it is impossible for him to test this directly by exposing healthy persons to the attack of infected bedbugs, but as it is, the evidence is complete and all of the facts point to the conclusion reached by Dr. Patton.

The establishment of this relation of the Indian bedbug to the transmission of a much-dreaded disease naturally directs our attention again to the pathogenic relations of our own common household pest, *Cimex lectularius* Linnæus, which is now under investigation by some of the medical profession. A. ARSENE GIRAULT."

In homœopathy the tincture of cimex has cured a few cases of intermittent fever, of malarious origin. The cause may be due to the absorption of malarial parasites by the insect. The curious part of the question is that all cases or types of malarious fevers are not cured by the tincture of cimex. Certain types with particular characteristics are amenable to the insect used as medicine.

Histology of Tuberculous Sputum.

The *British Medical Journal* of 13th July says:

"E. Lowenstein (*Zeit. f. Tuberk.*, Bd. x, Heft 1, 1906) deals with the significance of the presence of tubercle bacilli within the leucocytes in tuberculous sputum and gives in tabulated form details of 56 cases in which this phenomenon has been observed. The following are his results: (1) Tubercle bacilli are found within leucocytes with from one to three nuclei in about 10 per cent. of cases of manifest tuberculosis of the lungs. (2) This intracellular disposition of the bacilli occurs (*a*) in well-marked chronic forms of the disease and (*b*) also in recent cases with a tendency to recovery. (3) The intracellular disposition of the bacilli very frequently points to a rapid disappearance of the bacilli from the sputum. The author also describes a case of rabid tuberculosis of the genital organs followed by tuberculosis of the bladder in which the intracellular position of the bacilli was first observed after tuberculin injections had been employed."

The phagocytic power of the white cells of the blood may save us from many dangers incident to microbes. It is evident that the white cells attempt to devour the tubercle bacilli. The struggle between the two becomes keen. The defeat of the micro-organisms can save us from destruction. Their victory is death.

It has also been observed that streptococci add their mischief by germinating in the intestinal canal, in tuberculous cases. The swallowing of the phthisical sputum is asserted to be a great danger, which produces streptococci in the intestines. But it remains unknown how the tubercle bacilli can degenerate and give rise to streptococci. It may be said that the attempt of streptococci is to destroy the tubercle bacilli. Any how the one is as dangerous as the other.

Neurasthenia.

The *British Homœopathic Review* for July writes:

"Neurasthenia is a common disease at the present day. Dr. P. Jousset has just described, in the *L'Art Médical*, a case, with the treatment he proposes.

A lady patient of his was, in the month of January, 1906, attacked with influenza. This was the occasion of an attack of neurasthenia, which began on January 31st, with anguish of mind, disordered sleep, and loss of strength. A prominent symptom that persisted for more than six months was a state of mental anxiety, characterised by fear; fear of events caused by socialism, so that she would have no money in the house. She was the same in regard to her own affairs; she dreaded the most necessary resolutions; she found scruples in what she had or had not done; she was a prey to a constant indecision. Fear, scruples, restlessness and anxiety characterised her condition. Night brought her no relief, though the form of the disturbance was altered; she was sleepless, and so hot that she was forced to uncover herself. She continually changed her position in bed; she was restless and desired to get up, and with it all there was almost the fear of death.

Her appetite, which was usually moderate, was now almost gone; she hardly ate anything, and as this went on for months she got very weak. During this time she was prone to attacks of *lipothymia*, which frightened her very much. There was excessive anguish and fear of death, indefinite pains were felt all over the body with the exception of the head. During these attacks she was obliged to lie down, as she felt too weak to sit up.

Nux-vom., *ign.*, *tarentula*, and several other drugs were tried without any benefit. From a more attentive study of the symptoms, it was thought that *aurum* and *arsenicum* were indicated. *Aurum* 30, three globules thrice a day, and *arsenicum* 12, three globules in the evening, rapidly improved the case, so that by September she was practically cured. The attacks of lipothymia had been cured by *moschus* 1.

An examination of the pathogenesis of *aur.* and *arsen.* will show the perfect homœopathicity of our treatment.

Arsenicum.—This drug was given on account of the disordered sleep. On comparing Hahnemann's *Materia Medica Pura*, we find she cannot fall asleep before midnight on account of anxious heat, for many days (1010). About 1 A. M., excessive anxiety; sometimes she is hot, sometimes as though she would vomit (1009). The nocturnal pains only become tolerable when she walks about (773). She can find rest in no place, continually changes her position, will get out of one bed into another, and lie now here, now there (1008). Hahnemann says that this nightly restlessness "scarcely occurs so markedly in any other medicine." After midnight, feeling of anxious heat with desire to throw off the clothes

(883). The whole night much heat and restlessness, on account of which she cannot fall asleep, at the same time pulsation in the head (874). We would further notice that the mental symptoms of *arsen.* and those of our patient were quite in accord, for Hahnemann expressly remarks anxiety and anguish with restlessness.

Aurum.—This drug has for long been regarded as an important one in cases of melancholy. Hahnemann asserts that he has cured cases of melancholy with a tendency to suicide by the first trituration of *aurum.* He further states that he has obtained more complete and rapid cures with *aurum* 30. In his *Materia Medica* we find the following: Very much given to feel offended; the slightest thing which he thought offensive affected him deeply, and caused him to resent it (337). He sits apart all by himself in a corner, wrapt up in himself as if in the deepest melancholy, if left undisturbed; but the slightest contradiction excites the greatest heat and anger (340). Constant sulky seriousness and reservedness (341). Peevish dejection; he thinks nothing will succeed with him (342). He thinks that everything happens awkwardly, or that he does everything awkwardly (343). Always restless and undecided . . . this condition deprived him of all perseverance, all energy (347). Great anxiety, that has its origin in the præcordial region . . . and that drives him from one place to another (350). Melancholy; he imagines he is unfitted for the world; he is filled with intense delight when he thinks of death, so that he longs to die (356).

The above extracts are sufficient to show how closely the symptoms of the patient corresponded to those of *arsen.* and *aurum,* as found in our *Materia Medica.*"

Neurasthenia covers many phases and pictures of nervousness. From slight nervous prostration to extreme debility and palpitation, all shades of difference come under the domain of the disease. We successfully treated a bad case manifesting extreme weakness, pains running like electric shocks in different parts of the body, exhaustion to a degree which seemed to prove disastrous to life, palpitation so severe that pulse could not be counted during the fits of nervousness. He was under the treatment of a professor of the Calcutta Medical College without avail. Her heart troubles gave her greatest anxiety. The case was cured not by one medicine, but by successive use of several medicines in various dilutions not above 30th.

Plague in India.

The *British Medical Journal* of July 13, has the following statement with regard to plague in India:

"Mr. Field asked the Secretary of State for India whether he could state the total number of deaths in India from plague since it appeared, giving the number in each year; and what measures had been taken with a view of prevention. Mr. Secretary Morley answered that, according to a return which the Government of India had lately issued, the deaths were:

1896	... ...	1,704
1897	... ...	56,055
1898	... ...	117,953
1899	... ...	134,788
1900	... ...	93,150
1901	... ...	273,559
1902	... ...	577,427
1903	... ...	851,263
1904	... ...	1,022,299
1905	... ...	950,863
1906	... ...	332,181
1907	(January 1st to May 31st.) ...	991,003
	TOTAL ...	5,402,245

The preventive measures which had proved most successful were: (1) The systematic destruction of rats; (2) disinfection of houses and clothing; (3) evacuation of infected localities; (4) inspection of travellers; (5) segregation of the sick; and (6) inoculation. He hoped shortly to lay papers upon the table which would give a fuller account of the policy of the Government of India."

Mr. John Morley's statement to speak the least of it is an indictment of the British administration in India. The admission of failure to obstruct the ravage of plague is nothing but a self-condemnation, being conscious of the fact that plague is a preventible disease and it was obstructed and abolished from Europe in the olden days. Doubt can not be entertained that he is aware of the fact of its abolition from England. Can it not be questioned that the methods adopted by the Government of India to obstruct its ravages have proved complete failures. After all the self-condemnation, the touchy government can not tolerate any remark on its admitted farrago of nonesense with regard to the plague administration.

CLINICAL RECORD.

Foreign.

CLINICAL NOTES AND CASES.

By R. F. Rabe, M. D., New York.

Case: *Constipation; Selenium.* During convalescence from typhoid fever Miss M., age 35, was much troubled by an annoying constipation. No desire for stool and no stool without an enema.

Stools enormous in size and requiring the severest straining to evacuate them; hard and dry.

After stool much exhaustion and sweat about the head and upper part of the body.

It seemed almost impossible for the stool to pass the anus.

These symptoms, together with the fact that the patient had always drunk tea to excess, led to the selection of Selenium, which remedy was given in a broken dose of the 200th potency, followed promptly by normally easy stools every other day.

In the same patient, during the latter part of the first week of the fever, and apparently as the result of the strenuous arguments put forward by the physician and nurse to induce the patient to submit to the use of a bed-pan, a sudden, seeming retention of urine developed. The nurse failing to facilitate micturition by the usual simple means, at length catheterized and was much perplexed to find no urine in the bladder. The case doing well on a single dose of Bryonia and no alarming symptoms arising, the suppression was not seriously regarded. At the end of eighteen hours a free emission of urine voluntarily occurred, but thereafter the patient, neurotic in the extreme, was raised upon the vessel in bed during urination. No medicine was given.

PRACTICAL WORK WITH THE REPERTORY.

Case: *Cough; Nux.* Mr. C. P., medical student, presented these symptoms:

Itching and tickling under the sternum.

Cough < on first lying down.

Wheezing in chest under the sternum when coughing.

Thick, yellow mucus expectoration, more easily brought up by eating or drinking something hot.

Obstruction of the left nostril.

Cold drinks < the cough.

Cough < by thinking of his symptoms.

Five minutes work with Bönninghausen's Pocket Book brought out the following:

Cough < thinking of his disease (P. 304), *Agar.*, BAR. C., *Calc. phos.*, Dros., Bell., NUX VOM., Olean., *Oxyt.*, *Piper*, Plb., RAN. BULB., SABA., *Spig.*, *Spong.*, *Staph.*

Cough: < from cold food or drink (P. 282), eliminating those remedies not occurring in both rubrics. *Agar.*, Bar. c., Bell., NUX VOM., *Plb*, *Sabad.*, SPIG.

Cough: < (first) lying down (P. 289). *Agar.*, Bar. c., Bell. NUX VOM., Plb., SABA., Spig.

Obstruction of left nostril (P. 49). *Agar.*, *Bell.*, *Nux.*

Expectoration yellow (P. 119). Nux vom.

One dose of Nux vomica cm. (Sk.) promptly cured.

A CASE OF MUMPS, WITH COMMENTS.

Mr. W. S., age 34, was taken ill with mumps. He had recently been exposed to the disease, but thought little of it. The left parotid gland was swollen, though not greatly, with some temperature and thirst. Rhus 30, a few doses were given. The patient kept at his work about the stable, feeling mean, as he expressed it, but not sick enough to be in bed. The swelling subsided in a few days without affecting the right side very much, but the right testicle now began to swell. I had not seen the patient in the meantime, and on being informed of the metastasis sent one dose of Pulsatilla 45 m. (F.).

Two days later I was sent for and found the patient worse in every way. Temperature 104·8, pulse 100 and weak. Great restlessness and fear that something was going to happen to him. Had not slept at all the night before and was particularly anxious and restless during the small hours of the morning. Questioned as to his thrist he replied, "I want to drink constantly but I do not take more than a sip at a time." The right testicle was swollen to the size of a good-sized lemon, somewhat tender on palpation, but not very painful subjectively. The tongue was thickly coated white, with red edges. Of course but one remedy is possible, and so Arsenicum album 900 (F.), in water, was ordered to be given every three hours. This was at 5-30 P. M. The patient was at once put to bed. On the following morning at 11 o'clock the temperature was 100, pulse 79 and stronger. The patient had slept and was no longer anxious or restless. There was no perceptible change in the size of the testicle. Sac. lac. was now given

in water every three hours. The next day the temperature was 99·6, pulse 66, and the patient feeling good but weak. Two days later the testicle, though slightly less swollen than at first, showed no further signs of diminishing in size. One dose of Aurum met. 75 m. (F.), was now given and rapidly reduced the affected organ to its normal size within a few days.

COMMENT: This patient should have been more carefully prescribed for in the very beginning. This would have avoided the metastasis. Pulsatilla was given without seeing the patient, hence carelessly and for the disease itself. This is an old and common error which we all make at times, but should not be guilty of. Lack of time, hurry, thoughtlessness, all lead to routinism. Arsenicum *was* the *patient's* remedy, not that of, or for the *disease*. The patient's sickness was expressed in his individuality, peculiarities and characteristics as an Arsenicum sickness, hence Arsenicum alone could cure, given for the symptoms of the patient, not for the diagnostic label, mumps. Aurum was given for the product of the disease, i. e., a swollen testicle. Aurum produces such a condition pathogenetically. Hence this is an example of pathological prescribing, but based upon known facts, not upon hypothesis, conjecture, experiment or experience. It is therefore not empirical. Such examples are few in homeopathic practice, but will increase in number as our knowledge of materia medica increases. They can be made use of only in the absence of symptoms of the patient himself. For example, Pulsatilla will in a majority of instances cure a stye. If, however, the patient be a Thuja or a Staphysagria subject, the remedy will fail, although apparently demanded by the acute symptoms. Here, the remedy pertaining to the patient himself, not that pertaining to the disease itself must be given.

This is the great fault with our homeopathic text-books on practice. They all necessarily treat the disease, and he who is guided by their teaching finds himself lost in the wilderness of doubt and confusion. Jousset does not even mention Arsenicum in the treatment of mumps. Neither does Goodno, but this is not surprising when one has heard and knows Goodno. Practically all the works on homeopathic practice show this same lamentable misconception of the philosophy of Homeopathy. Hence Homeopathy as a school has largely lost its pristine vigorous individuality. Our old school friends cannot in the least be blamed when they fail to see any good reason why Homeopathy should longer continue its sectarian name. Single board bills in state legislatures are the in-

evitable consequences. Hypocrisy is rampant in the school, too much shouting for Hahnemann at alumni banquets by men who rarely or ever follow his precepts. Human nature is indeed strange.—The *Medical Advance*, June, 1907.

SULFUR: CALCAREA.

Mrs. L. consulted the writer in May, 1906, in regard to her son, æt. 14 months, of very poorly developed musculature for his age, the head lopping backwards when raised, the large fontanelle not yet closed, the head apparently moderately hydrocephalic, the face pale, somewhat bloated. Dentition had begun late, and each eruption had been very troublesome; restless sleep, the child starting up with a frightened cry, the well-known hectic cheeks, also fever and light convulsions. For weeks this condition, with accompanying mal-nutrition had been oft repeated, and the development of the child greatly delayed. Calcarea carbonica was the only possible remedy, of which the patient got morning and evening a dose of the 6th trituration. In July the mother wrote: "The child, since using the powders has cut four back-teeth without fever or other disturbance, much to my surprise and delight. For 14 days we have been without medicine, and it seems as though the eyeteeth were coming through, as for the last two days there has been unrest, hot head, and reddened lids." The remedy was of course, continued.

Mr. F., æt. 62, consulted me in April, 1906. In 1876 an accident caused loss of vision in the right eye. The left eye, since youth, has had central corneal opacities, and hence his seeing power has been much diminished. Since September, 1905, he has been in an oculist's care. From the old cicatrix in the right eye a grave inflammation had developed, and the patient was fearful lest this extend to the fairly good left eye and destroy it. During this period he has had many pains, and many crops of boils. The oculist had treated him with atropine instillations and ung. præcip., without result. I found a nearly vertical cicatrix in the median line, iritic adhesions to the corneal scar, marked redness and swelling of the conjunctiva, the whole eye greatly irritated. At the upper extremity of the scar the patient felt as if a foreign body were sticking in, and here was great sensitivity to pressure. Heat and sunlight were badly borne. During the last few weeks no boils had appeared, but the patient complained of piles, abdominal fulness, and constipation, and after meals congestion of the head. No local

applications were prescribed other than lukewarm compresses, while the plethoric condition was met by a proper dietary and other suitable measures. The whole condition called for sulfur; an uninterrupted improvement began, and in a few weeks he was able to take up his long-neglected work.

Another sulfur case may be mentioned which, superficially, seems to have no relation to the preceding. Mrs. R., æt. 54, was found lying in bed, a lean, slender individual, with yellowish complexion and a pained physiognomy. She had suffered for eight weeks with a severe sciatica; the least motion aggravated the violent pains which tearing and lightning-like shot from thigh to foot. She had previously suffered from chronic constipation, but now avoided stool for days for fear of motion, thus clearly adding to the pelvic plethora. The patient complained of great muscular weakness, almost paralysis, in the affected right leg. The nature of the pains led to the prescription of colocynth, without the least result, and electricity, baths and fango were equally ineffective. The pains continued. I then gave sulfur 3 on the totality, and its action was so remarkable that on the third day after the first dose the patient surprised me by taking a few steps alone, though with much swaying and holding fast. Dr. Karl Kiefer. The *North American Journal of Homœopathy*, June 1907.

SHORT CLINICAL NOTES.

By Dr. Compston, Crawshawbooth (Lancs.).

Lachesis.—This medicine is of great value in the debility some patients feel in spring. I have several patients who are troubled with *debility, usually associated with want of appetite and emaciation*—such symptoms as would suggest tuberculosis or other wasting disease—in the spring time. I have found *Lachesis* 30, t.d.s., of great value in this condition. I might add that the most marked cases have been females, and have belonged to families in which there was a history of tuberculosis.

Sulphur.—I will give two cases showing the use of this invaluable medicine. *Girl*, aged 17, thin, bilious temperament. Suffered from nocturnal enuresis when about 8 years old. Family and personal history good. For several months has had almost nightly enuresis during sleep. During the day there was a *sense of tenesmus in bladder region at end of micturition.* Mouth very parched on waking in morning. One dose *sulph.* 30 given, and for three weeks

after this she only wet the bed three times. Another dose completed the cure. *Gentleman*, aged 39. Lympho-sanguine. Rheumatic and gouty family history. Healthy life and good habits. Eighteen months ago he developed an itching eczema of lobes and ear passages, with steadily increasing deafness. These symptoms were aggravated by bathing in salt water or if run down. His voice sounded a long way off to himself. Politzerising did not improve him. He had been to one or two ear specialists without benefit. A single dose *sulph.* 30 improved him so much that it was three months before he wrote to tell me he was quite better, the condition having gradually improved.

Æsculus.—Married lady, aged 35. Three children. Lympho-bilious. Very bad family history of rheumatism and phthisis. For years has had trouble in lower part of back; this has been much worse since child-bearing period, she having had pelvic abscess, &c. She has been to several doctors for her back. It was in *left sacro-sciatic region, aggravated on first rising in morning, having a stiff, bruised feeling; also much aggravated by prolonged exertion, especially the day after* the exertion. It was also aggravated three days before and during menstruation, which is regular, but excessive, lasting seven days. No complaint of piles. Dose, *æsc.*, cm. For a few days was decidedly worse, since then her back has not been so well for years, and she does not feel it in the morning. The patient is still under treatment for some uterine condition, which did not yield to a second dose of *æsc.*, cm., but has greatly improved since dose of *sep.*, cm., followed by *æsc.*, cm. I may say there were several weeks between each dose of medicine.—*The British Homœopathic Review*, July 1907.

LACHESIS IN DIPHTHERIA.

By J. Robertson Day, M.D.

Annie W., aged 2, came on May 24th, 1907, with a temperature 101·4°. She was very fretful, but able to come with her mother to the hospital. On examining the throat, a suspicious patch of membrane was seen on the left tonsil. With a swab I wiped off some of this, and the operation was accompanied by slight bleeding, although no force was employed. The swab was submitted to the Pathologist of the hospital, who reported, in due course, "cultivations made from the swab show the presence of the diphtheria bacillus." *Lachesis* 12, three hours, was prescribed.

On May 27th, the patch on the left tonsil had entirely disappeared, the child was very much better, with a temperature 98·6.

On May 30th, improvement was maintained, and *china* 3x *ter die*, was substituted for *lachesis* 12.

June 7th, she was feeling quite well.

Onosmodium 3 in Cephalalgia.

Walter R., aged 14, has been attending for some time with severe headaches, genrally has two or three a week, ending with vomiting. He is a nervous boy, given to sleep-walking. *Bell* 3 and *iris* 3x were prescribed at various times with benefit.

I then found he was astigmatic with both eyes. This trouble was corrected, but still the headaches continued.

On May 17th, 1907, I prescribed *onosmodium 3*, and on June 7th he reported having had no headaches for three weeks.

Dr. Clarke's *Materia Medica* says "*onosmodium* has probably cured more cases of headache associated with eye-strain than any other remedy since it was proved."—The *British Homœopathic Review*, July 1907.

Gleanings from Contemporary Literature.

THE CROONIAN LECTURES ON PLAGUE.

By W. J. R. Simpson, M.D.

Discovery of the Plague Bacillus and its Results.

Plague is a very ancient disease but the recent discovery of the causal agent is so epoch-making that it divides its history into two distinct periods of very unequal length. The first period is that previous to 1894, before the discovery of the bacillus of plague by Kitasato and Yersin. The second covers the years which have elapsed since that discovery. One extends over several thousands of years at least; the other is only some 13 years old.

The fact that the specific bacillus is found in the buboes of the bubonic form, in the blood of the septicæmic variety, in the contents of the vesicles and pustules that sometimes appear on the skin, and in the sputum of pneumonic cases places the physician in a more favourable position for diagnosis of this disease than he ever was before. It provides him with a test, confirmatory or otherwise, of the suspicions he may have arrived at from the clinical symptoms of the disease and enables him to come to a conclusion with a degree of certainty which was previously impossible. It should also put an end in future to the controversies and discussions similar to those which invariably arose in former times when an epidemic threatened and which resulted in loss of valuable time before measures were taken to check the epidemic.

Smears from the contents of plague buboes or from the hæmorrhagic effiusion around them and from the sputum of pneumonic cases show usually on staining large numbers of bipolar microbes. In some cases, however, the microbes are few in number and in rare cases their presence is not discoverable by the microscope but only by culture and inoculation into susceptible animals. This is practically the rule for the blood in septicæmic cases and also in bubonic cases a short time before death. The typical plague bacilli with their bipolar staining and ovoid shape are frequently mixed with others less typical having a great variety of forms, including long and slender bacilli, and taking on the stain more faintly. Spherical-like and disc forms may be found in old buboes during life and in affected tissues after death. These swollen and irregular-shaped bacteria do not stain well In their advanced stages and ultimately present only a mere outline. The importance of these forms lies in the fact that they are prone to lead to mistakes unless the great variations which the plague microbes may undergo are borne in mind. Valuable as the morphological and staining characteristics of the plague bacilli are in times of plague, they cannot be wholly depended on to decide whether the first cases of an unknown or suspected disease in a hitherto healthy locality are plague. Resort has then to be had to cultures which in the case of plague give particularly trustworthy results.

The stalactite growth in peptone broth which was discovered by Haffkine is the surest culture test in that no other bacilli give a similar stalactite formation. A few drops of oil or butter fat may be added to the peptone broth. In either medium kept in a condition of perfect quietness the plague germs grow from the surface downwards into the fluid in the form of stalactites. To obtain the formation the flask has to be secured against the slightest vibration and against sudden changes of temperature, especially if applied to one side of the flask. In London in the vicinity of the Underground Railway such are the vibrations that the stalactite formation is very difficult to obtain. If nutritive gelatin are used instead of broth and the culture is kept in the incubator at 35°C. the medium remains fluid and the stalactite formation is more easily obtained and is particularly typical.

The involution forms which the plague bacilli assume in dry ager are also very distinctive. They only appear in bacilli which have been recently removed from the bodies of plague patients and are generally lost when the microbe has been cultivated for sometime in the laboratory. The involution forms when quite typical are spheres and cells of various sizes resembling yeast cells and are many times larger than the bacilli themselves. They undergo various changes according to the age of the culture. Normal at first, they become slightly swollen and rounded; later their size increases and they may reach in volume as much as 20 times that of the original bacillus. These forms at first take the stain well but subsequently portions of the cell stain more faintly. Later the whole cell refuses to stain and ultimately there are seen only powder-like granules indicating the position of the cell. In other cases the involution takes another form such as pear and crescent shapes and filaments of unequal diameter.

A third characteristic is the appearance of the culture on dry ager. When the plague bacillus is spread uniformly over the surface of dry ager from which all condensation fluid has been evaporated the growth on culture is uniform and possesses a peculiar appearance. When the tube is held in a horizontal position with the growth downwards and is examined through the depth of the ager by reflected light it has the appearance of the sheen seen in the back of a looking-glass. Unless dry ager is taken this appearance is not obtained, and instead of a shining uniform growth there will be a layer of microbes of varying thickness and strewn over this growth will be colonies of different sizes suggesting contamination by extraneous microbes. Inoculation of the microbes into susceptible laboratory animals, such as rats, guinea-pigs, and mice, furnishes an aditional test in these earlier cases.

The certainty of diagnosis which has thus been acquired by the physician is of inestimable value on the first appearance of suspicious cases in a community. Thus the public health authorities in this and other countries are able at once to determine whether a suspicious illness or death reported to them is plague or not and on the information so

obtained to take immediately, if necessary, the requisite measures to check the spread of the disease. Certainty of diagnosis is not the only advantage derived from the discovery of the bacillus. Investigations into plague have been given a precision which was impossible before and many observations can now be confirmed by experiments. For instance, it is now absolutely proved that the epizootic of rats which has been observed so frequently as associated with plague epidemics is plague in rats. The relationship was formerly suspected, but now it is established. The isolation of the bacillus has also led to the discovery of Haffkine's prophylactic, the value of which as a preventive of plague is, as will be shown later, well established. Whether sufficient advantage has been taken of the new knowledge thus acquired will be considered afterwards.

It would be a mistake to suppose that because the present period has been so fruitful of results from a scientific and practical point of view that the past is sterile. On the contrary, it is full of observation of the highest importance, the value of which is only being slowly realised as greater experience in plague epidemics is gained. The clinical aspects of plague are as well described by the older authors as by the most recent, the mortality is as great to-day as formerly, the variation in the types of the disease was known, and the epizootic among rats and other animals, and the rôle which some of them play in the spread of the disease were recognised, although not proved to demonstration as now, and formed the bases of some of the preventive measures employed to check the disease. It will accordingly not be wasting time to refer briefly in this first lecture to some of the more salient facts connected with the history of plague. The antiquity of the disease, its endemic centres, its pandemics, and epidemics, which are all so well described by Dr. J. F. Payne, a distinguished Fellow of this College, need not detain us.

The Pandemics of the Sixth and Fourteenth Centuries.

Pandemics of great magnitude are fortunately few in number and far between. There have been several pandemics, but two only are recorded as standing out conspicuously as scourges of a particularly devastating character and the effects of which were felt for many years after they had disappeared. These were the Justinian pandemic in the sixth century and the Great Pestilence of the fourteenth century, later called the Black Death. The long interval of 800 years intervened between these two great pandemics of plague. Between them were many epidemics of pleague in Europe, Asia, and Africa, some of which assumed more or less pandemic proportions, but none reached the dimensions of these two. The origin of neither is known, but in both great commercial centres played a prominent part in maintaining and distributing the infection. The Justinian plague, which continued over 50 years, first attracted attention by its outburst at Pelusium, which was then an emporium for the produce of the East and the West. The endemic centres of Mesopotamia, Arabia, and Æthiopia were in commercial relationship

with Pelusium, and it is probable that the infection came from one of these. The balance of evidence is in favour of Æthiopia. It is a matter of interest to note that within recent years endemic centres of plague have been discovered in German East Africa and Uganda. The town in which plague reaches such dimensions as to attract more than local attention is seldom the one in which it originates. For instance, at the present day the pandemic now prevailing is commonly attributed to Hong-Kong and Canton, whereas the disease was brought to these cities from the Chinese endemic centre of Yunnan.

The great pandemic of the fourteenth century was also associated with large commercial centres, for it entered Europe by the important emporiums and marts situated at that period on the Volga and in the Crimea and which, as pointed out by Creighton, were the terminal marts of the northern caravans from China and the Far East. It should be mentioned, however, that they were also the marts connected with the trade routes from India. The origin of the pandemic has been ascribed to China and to India. The Russian records place its starting point in India. Clemow, in his recent work entitled "The Geography of Disease," points out that plague prevailed in India in 1332 and that probably the Russian chroniclers are correct. Wherever the pandemic arose there appears to have been for several years a wide diffusion of the disease in the large dominions belonging to the Tartars and the Turks who at that time ruled over the greater part of Asia. Galfridi le Baker Swynebroke set down the period of prevalence in Asia before plague entered Europe as seven years. When it did arrive it is estimated to have destroyed 25,000,000 of its inhabitants. England and Wales at the lowest computation lost 2,500,000 of its inhabitants, or about half of its total population.

For over 300 years after this visitation Europe suffered from fresh invasions of plague which reinforced the languishing infections already existing from previous ones. In the countries attacked there were some epidemics in towns, which though continuing only for a few months, are memorable for their great mortality. For instance, the epidemic in Venice in 1576 caused 70,000 deaths; that in Moscow in the same year, 200,000 deaths; that in Naples in 1656, 300,000 deaths; that in Rome in the same year, 145,000; that in Genoa, 60,000 deaths; and the epidemic in London in 1665, nearly 70,000 deaths. It was exceptional for an epidemic to recrudesce and occur year after year, which in India is almost the rule, so that in the latter case the mortality, though smaller in individual epidemics, gradually accumulates, with very few exceptions, to a proportion as great if not greater than that recorded in former times. Thus, for instance, in Poona, which is a town with a population of 120,000, over 40,000 of its inhabitants have died from plague in ten years, which is proportionally at least twice the mortality of the great plague of London in 1665. In Bombay over 150,000 of its inhabitants have been destroyed by plague. In this respect the history

of plague tends to repeat itself. In the pandemic of the sixth century it is recorded that "if it passed over any place only slightly or mildly touching the inhabitants it returned there afterwards leaving untouched the neighbours against whom it had spent its rage before, and it did not depart from there until it made up the full measure of the dead in proportion to the amount of destruction which it had brought on its neighbours."

THE EFFECT ON THE LIVING OF GREAT EPIDEMICS OF PLAGUE.

Great epidemics of plague not only destroy large numbers of people but they leave their traces on the living. The effects on the living have usually been very marked and very similar. They are mostly psychological and social in their nature. Great numbers of the living are unable to bear the strain of the scenes around them and the uncertainties of life which the epidemic brings too plainly before them. Minds which have hitherto been sober and calm become overwrought, unhinged, and hysterical. Excitability and suspicion are engendered, often leading to illusions, delusions, and excesses of all kinds, which in some instances become contagious and dangerous. The change is not sudden but comes gradually. First of all, the normal courage solicitude for the sick, hope, and religious trust which belong to the healthy mind are unaffected, but later these are associated wih intense pity, exaggerated religious fervour, and the deepest despair. Then they are followed by panic and a total revulsion of feeling in which the predominant features are fear, selfishness, callousness and heartlessness, and later still if the scourge continues, there is a display of all the most sordid and worst passions on the part of the unbalanced portion of the population.

Plague above all disasters, tends to bring out for a time the weak points in humanity and seldom the virtues. Hecker gives an account of the frenzy and mania caussed by mental strain brought on by the terrible events associated with the Black Death. He describes the doings of the flagellants in Germany, Hungary, Poland, Bohemia, Silesia, and Flanders, who marched through the cities in well-organised processions and who bore triple scourges, tied in three or four knots, in which points of iron were fixed and with which they flogged themselves. Harmless and welcome at first they later became a terror to the inhabitants of every place they visited. He describes also the epidemic of dancing mania that followed and he gives an account of the cruel and fanatical persecution and wholesale massacre of the Jews who were accused of poisoning the wells and thus causing the plague. He says: "Already in the autumn of 1348 a dreadful panic caused by this supposed empoisonment seized all nations; in Germany especially the springs and wells were built over that nobody might drink of them or employ their contents for culinary purposes, and for long time the inhabitants of numerous towns and villages used only river and rain water..... By this trying state of privation, distrust and suspicion, the hatred against the supposed poisoners became greatly increased and often broke out in

popular commotion which only served still further to infuriate the wildest passions." The suspicion and rumours regarding the poisoning of the wells in Panjab are only the reappearance of a part of the credulity and delusions which prevailed during the time of the Great Pestilence of the fourteenth century.

There were other effects besides these disorders of the mind. The whole social structure became seriously disorganised owing to vast tracts of country becoming waste land and an immense number of huts and houses becoming tenantless. Price of commodities rose, rents fell, payment of the taxes on land could not be obtained. There ware agrarian, labour, and political troubles. Labourers and workmen were scarce and demanded higher wages, and it was found impossible by laws, imprisonment, fines, or any other methods, to bring them to conform to the older order of things. A new era with a new spirit sprang into existence which in the course of years and after many struggles banished the old.

THE PERIODIC QUIESCENCE AND RECRUDESCENCE OF PLAGUE.

The epidemics of the East and West have generally been more or less synchronous with one another. The last pandemic of plague was in full activity in the seventeenth century and covered a large portion of Asia, Africa and Europe, but towards the end of the century the disease began to contract its limits, leaving Western Europe free in the course of a few years, a freedom which, with one notable exception, has continued. That exception was the epidemic in 1720 in Marseilles, when 60,000 of its inhabitants died from plague which had been imported from the East. As regards the rest of Europe the retrocession continued, and in the course of 150 years plague not only disappeared from Europe altogether, but also showed a remarkable cessation in its old endemic centres of Mesopotamia and Arabia. What remained of the disease was shown by Tholozan to pass through a very definite stage of development, being mild at first, then virulent and again mild, and the preponderating element was mildness. The mild plague consisted of glandular swellings unaccompanied by fever, the swelling showing themselves in the groin, armpit, or neck. The epidemics which Tholozan studied were observed by him to be self-limiting in their extension and, as he points out, were not controlled by the plague measures which were often adopted after the plague outbreak had ceased. Within recent years the plague epidemics that arose from the old centres in Mesopotamia and Arabia were apparently incapable of wide extension and even under conditions seemingly most favourable for their spread. The conclusion from Tholozan's researches appeared to be that for epidemic plague endowed with qualities of diffusion, whatever that may mean, no quarantine on land would stop its progress, while for other epidemics of a self-limiting character quarantine on land was not required.

Following the retrocession and contraction of plague Europe has remained free for over 60 years, broken only by a short but virulent

outbreak on the Volga in 1879, investigated by Dr. J. F. Payne and Surgeon-Major H. Colville; by a small outbreak at Oporto in 1899, and a few cases at Glasgow and Naples in 1900. Western Europe has been free for nearly 200 years, the last epidemic being at Marseilles nearly 187 years ago. The Great plague of London occurred more than 240 years ago.

Quiescence of plague for varying periods is not a new feature in the history of the disease. It is necessay to emphasise this fact, for the long quiescence in Western Europe has given rise to the view that Europe has seen the last of its plague epidemics, and accordingly the epidemic, now prevailing in India is viewed with regrettable complacency. I think this view of the invulnerability of Europe is as likely to be as correct as the prevalent notion that London was freed of plague by the Great Fire, irrespective of the fact that plague remained in London for 14 years after and that the disease disappeared from the whole of England and most of Western Europe about the same time.

Subsequently to the Justinian plague and its offshoots Europe, with the exception of an epidemic in Constantinople in 697 and another in Sicily, Calabria, and Constantinople in 749, remained free from plague for 400 years, and Syria, which is nearer the endemic centre of Mesopotamia, remained free for 200 years. Bagdad itself in the centre of the endemic area remained free for some 50 years at the commencement of the Abbasidic dynasty at a period of unexampled prosperity. Moreover, Egypt, which has suffered at varying intervals from devastating epidemics of plague during the past 2000 years, remained free from the disease from the eighth to the eleventh century, or a period of 300 years. Long immunity of towns as of countries is also not uncommon in regard to plague epidemics even when plague is in the country. When Bombay was attacked with plague in 1896 it had been free from the disease for 184 years, when Moscow was attacked in 1771 it had been free for 150 years, and when London was attacked in 1499 it had been free for 150 years.

Various explanations have been given of the retrocession of plague from Europe. It has been ascribed to the social and sanitary improvement of the people since the seventeenth century; it has recently been set down to the invasion of the Mus decumanus at the beginning of the seventeenth century and the retirement, except from the seaports, of the Mus rattus; and it has been attributed to the abandonment of overland routes as the principal means of transport and communication between the East and West, to the substitution of sea routes, and to the introduction of quarantine at seaports trading with infected countries. None of these explain in a satisfactory manner the sudden retrocession of plague which stands as a remarkable epidemiological fact, but individually and collectively they may have exercised an important influence in keeping the disease in check once it had receded. Probably the most powerful of these was the change of land routes to sea routes.

whereby the transport of goods from the East to Western Europe was no longer effected by caravans which passed through the endemic centres of plague in Mesopotamia and Arabia. It was a change which must have materially lessened the chances of infection and of importation of the disease. From this point of view the new railway schemes which are to link the East with the West and reopen the old overland trade routes are not unlikely, unless special precautions are taken, once more to bring with them the risks of plague importation.

The General Clinical Features of Plague.

Clinically, plague presents the same features to-day as those described by the most ancient writers on the subject. The accounts of the disease are remarkably alike whether given by Dioscorides and Posidonius in third century before the Christian Era and referred to by Rufus a century later when writing of the plague prevailing in Lybia, Egypt, and Syria, or by Procopius in the sixth century, or by Guy de Chauliac in the fourteenth century, or by Skeyne in the sixteenth century, or by Diemerbroeck, Lodge, Hodges, or Boghurst in the seventeenth century, or by the numerous writers on plague since that time up to the most recent years.

The glandular swellings in the bubonic form, the coughing of blood in the pneumonic, the extreme prostration, pallor, muscular weakness, delirium and rapid death in the septicæmic, and the appearance of boils or blains in the carbuncular type have been observed and described in both ancient and modern epidemics of plague. Procopius graphically describes the sudden onset and fever, the appearance on the day of attack or the next day or a few days later of the bubo in the groin and armpit and sometimes in the neck, the drowsiness in some, the madness in others, the desire to wander, and the difficulty of keeping some patients in bed; he mentions the large size and suppuration of the bubo as indicating a milder attack and the reverse a severe and fatal illness and he draws attention to a feature which every physician soon learns for himself—viz., the uncertainty of prognosis. The patient's appearance is most deceptive and cannot be taken as a guide; patients pronounced to be getting well will not infrequently suddenly die and others in whom all hopes of recovery are abandoned recover with a rapidity that is marvellous. Procopius does not forget to record the comparative immunity of physicians and attendants.

The description by Guy de Chauliac of the epidemic of Avignon in 1348 is of special interest because it is written by a medical man of high standing in his day and because it distinguishes more clearly than others before him the pneumonic and bubonic forms of plague. Guy de Chauliac was himself attacked with plague towards the end of the epidemic but recovered. He says: "I felt a continued fever with a swelling in the groin and was ill more than six weeks in such great danger that all my friends thought I should die, but the swelling ripening under the treatment I have described, I escaped by the mercy

of God." The treatment consisted in the application of the figs and cooked onions mixed with plantains and butter, to ripen the swellings, followed by incisions and the usual treament of open sores. Describing the epidemic he says: "The plague commenced in January, it continued seven months during which time it appeared in two forms. During the first two months it was accompanied by a continuous fever and with a coughing of blood. All who were attacked died in three days. During the other months the continuous fever was accompanied with tumours and boils which appeared on the external part of the body chiefly in the armpits and the groin. Those who were thus attacked died in five days. The disease was so severe and so contagious, especially that which was attended by coughing of blood, that it was contracted not only by visiting and living together with the sick, but by being in their presence, so that people died without service and attendants. Men were buried without priests and without religious rites, the father abandoned the son, and the son approached not the father. Charity was dead and every hope lost."

The very infectious character of pneumonic plague as distinguished from the other forms of the disease is now fully established, and it is the one form which is dangerous to medical men, nurses, and attendants on the sick. The sputum and blood coughed up teem with plague bacilli, as was first shown by Major L. F. Childe of the Indian Medical Service. Fortunately, most epidemics of plague partake more of the bubonic than the pneumonic variety, otherwise the liability to infection would be as great as it is in influenza.

Variation in Type and Behavior of Different Epidemics.

All epidemics are not alike, although their general characters are similar. The bubonic, pneumonic, septicæmic, and carbuncular varieties of the disease may vary much in their relative proportions in different epidemics, and symptoms may be present in some epidemics which are absent in others. The situation and relative position of the buboes may differ, and instead of being with the usual frequency in the groin, armpit, and neck may be found in the popliteal space, elbow, and other positions. In older epidemics carbuncles and tokens or petechiæ were observed, but they have been rare in later epidemics. In the epidemic of sixth century affections of the throat and withering of the limbs and gangrene were added to the buboes, carbuncles, and black boils, or pustules; in the fourteenth century the pneumonic form was particularly prevalent; in the sixteenth and seventeenth centuries sweats were a distinct feature. In the plague of London there were coloured sweats. Hodges says: "These sweats also of the infected are not only profuse, but also variously coloured; in some of a citron hue, in others purple, in some green or black, and in others like blood. The sweat of some would be so fœtid and intolerable from a kind of empyreumatic disposition, possibly of the juices, that no one could endure his nose with the stench. Nothing of this kind has been

recorded in recent epidemics, nor have the carbuncles which formed a very conspicuous and common feature in many epidemics been observed of late years with much frequency; when they have been observed the type of plague has generally been of a milder character. This mildness was also noticed in a number of the Egyptian epidemics contrasting much with other epidemics in which the carbuncles always signified a very fatal form of the disease. The comparative absence of nervous symptoms and septicæmic cases gave to the Cape Town epidemic a character differing in these respects from that of the Hong-Kong and Bombay epidemics which I saw. The Poona epidemic of 1906 also struck me as presenting fewer of the nervous disturbances which I witnessed there in the epidemic of 1897. It is noticeable that when the disease is comparatively mild views as to its non-contagiousness prevail, whereas when severity is its distinguishing feature contagion is in favour. Recent observations would indicate that both contagionists and non-contagionists were right to some extent, though their views were of the most opposite character. Pneumonic plague is directly infectious from man to man, the bubonic is not directly infectious, while the septicæmic may possibly be both directly and indirectly infectious. It would accordingly depend on the proportion of each of these varieties in an epidemic as to the contagiousness or the non-contagiousness from the disease being most predominant.

The great proportion of pneumonic cases in the epidemic of 1348 and the contagiousness of this form of the disease probably account for the rapidity which characterised its spread and which has recently been observed to be a marked feature in small local outbreaks of this form of the disease. If this pandemic be excepted together with a number of small local outbreaks of plague one of the peculiarities of plague is its slow progress from place to place, districts and towns close to those infected remaining for a long time free from the disease.

A frequently quoted instance is the Great Plague of London taking six months to travel from St. Giles's to Stepney. In Bombay the plague confined itself to the dock quarters before it spread to other districts. At Poona over six months elapsed before the disease established itself at Kirkee which was in daily communication with Poona and only separated by a river spanned by a bridge. During the first outbreak in Canton in 1894 in which 80,000 out of 1,000,000 inhabitants died from plague, the disease never crossed the narrow creek, some 20 yards wide, which separated plague-infected houses in the Chinese town form the European settlement of Shamien; neither Europeans nor the Chinese servants on the premises nor the rats in the foreign settlement were affected. The water here provided a check to the spread of the disease. It was also observed that the Chinese population living on the river did not suffer from the epidemic, which reminds one of a similar observation during the Great Plague of London. It is facts such as these and that animals living in the

ground were affected by plague that gave rise to the view held by the Chinese and the older non-contagionists in Europe that plague was a soil disease and that the spread of it was due to miasmata from the ground. The discoveries of Manson and Ross have revolutionised our notions of miasmata, and from this new standpoint the miasmata of plague appear to be explained by the role which the rat and the flea play in the dissemination of the disease, but many links are wanting before a satisfactory explanation of the recrudescence of plague is available.

ANCIENT ASSOCIATION OF THE RAT WITH PLAGUE EPIDEMICS.

The association between plague and rats is a very old observation. Apart from scriptural references there is evidence derived from some of the ancient monuments and coins of the connexion being known. Apollo and Æsculapius are each represented with the rat at their feet. There was the famous statue of Apollo by Skopias in which the god has a rat at his feet. Snakes are destroyers of rats, and in Asia Minor and elsewhere before the advent of the cat harmless snakes were kept in houses and in the temples doubtless for that purpose. This practice probably explains the accounts so frequently given of snakes and serpents dying during epidemics of plague. Both the cat and the snake were venerated for their services to man.

There is an interesting coin brought to my notice by Dr. Sambon and which can be seen in the collection of colonial Roman coins in the British Museum. It is a coin of the Emperor Lucius Verus struck at Pergamum in Asia Minor during a plague epidemic and represents Æsculapius with a rat at his feet and a small human figure standing by with his arms outstretched in the attitude of fear or worship. In the same collection there is a medallion of the Emperor Antoninus struck in commemoration of the erection of a temple to Æsculapius on the Tiberine Island at Rome. Plague was epidemic in Rome and a mission was sent to the temple of Æsculapius at Epidaurus to ask for advice. The advice given by the Æsculapian priests was apparently to destroy the rats, for on the reverse side of the coin is the return of the mission with a serpent, being welcomed by the river god.

The dissemination of plague by domestic animals was formerly recognised even more than it is at the present day and very decided views were held, particularly regarding those animals in close association with man; not only rats but also dogs, fowls, and pigs were held to be agents in spreading the disease. When plague prevailed in Europe these animals were as much inmates of the house as the people themselves and it was observed, as it is in South-Western China to-day where the same conditions prevail, that during epidemics of plague the rats, fowls, pigs, and cattle sickened or died, which was attributed to plague. In the pandemic of 1348 it is recorded by numerous observers that dogs, cats, fowls, cattle, and rats died from the disease. Skeyne in 1568, in his work on the pest, states that "quhan the domestical foules become pestilential it is ane sign of maist dangerous pest to follow." The

observations became so general that they formed a basis for certain orders in regard to the suppression of plague. Every European country has in its old orders concerning the checking of plague epidemic instructions to the inhabitants under certain penalties to kill domestic animals or to keep them confined to the house. Creighton mentions some of these orders as bearing on the regulations in England and Scotland against the spread of plague.

In the regulations in London against the plague in the seventeenth century it is ordered that no hogs, dogs, pigeons, or conies shall be suffered to be kept within any part of the City. In Rouen on April 14th, 1407, it was ordered under penalty that no person of any condition or rank should keep pigs. When plague broke out again in 1498 a similar order was issued, and in 1566 the priests of the Madeleine and Commander of St. Antoine were forbidden to keep in their houses pigs, fowls, and rabbits. At Evereux in Normandy a police order was issued in 1561 that every one of whatever quality or rank should not keep pigeons, fowls, rabbits, and pigs under penalty of confiscation and a fine of ten livres, and anyone giving information would receive half the fine. The killing of dogs is in nearly every order. A photograph, kindly lent to me by Mr. Henry Wellcome of a painting in the archives of Bologna representing a plague epidemic in that town is interesting, as it illustrates the actual killing of dogs during the epidemic. The picture shows the magistrate and his officers on duty. Some of them are removing the dead which are being lowered from the windows of the infected houses; priests are also to be seen administering the Sacrament. In the foreground are some men killing a dog and a little farther back there is a dog transfixed with an arrow. Similar measures for controlling plague were taken at Palermo in 1575. Ingrassia says, "an excellent measure was proposed and carried out. All dogs, cats, and other animals that might convey the plague from one house to another were to be destroyed." Not only were the dogs of the town destroyed but all those within a radius of at least four miles. Fiochetto, describing the measures that should be taken in the event of the discovery of an infected person in any house, says "fifthly, having killed all cats, dogs, fowls, and pigeons, prepare arsenic for the rats." No mention is made of fleas on these animals but it is evident that experience had taught the authorities that these animals sometimes by contracting the disease and sometimes by carrying the infection on their coats, furs, and feathers, though not infected themselves, conveyed plague. In connexion with the conveyance of the infection by animals not suffering from the disease there is the observation made by the Austrian Commission in 1897 of plague bacilli appearing in the fæces of a dog fed with plague material.—*Lancet*, June 29, 1907.

Acknowledgments.

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